

WINP (Wireless Input)

1. Appearance



The transmitter WINP (Wireless Input) will interface most of the existing wired timing devices (E.g. photocell, start gate) to an FDS wireless setup (TBox-Radio).

2. Power ON/OFF

The ON/OFF button switch has 2 functions:

1) Battery status

Press and hold the ON/OFF button (front left)

LED green: > 60%

LED yellow: > 20%

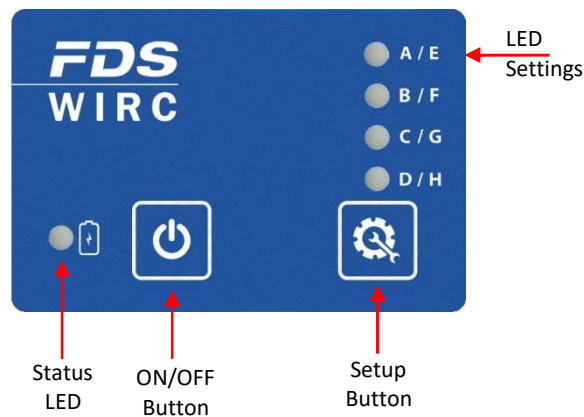
LED red: < 20%

2) Switch ON – OFF the WINP

a) Press and hold (1sec. – 2secs.) the ON/OFF button until the battery LED status is Yellow

b) Immediately release the ON/OFF button and quickly repress it (within 1 second) and hold down until the battery Led status briefly flashes Yellow and then turns to Green.

c) To switch OFF WINP, simply repeat step a and b (until the LED is OFF)



3. Battery status

1) Battery status whilst charging

LED	WINP On/Off	USB	Battery
Yellow	OFF	connected	Battery Charging
Green	OFF	connected	100% charged
Yellow Flashing	ON	connected	Battery Charging
Green Flashing	ON	connected	100% Charged

2) Battery status with device ON and USB disconnected

LED	WINP On/Off	USB	Battery
Green	ON	disconnected	100% charged
Yellow	ON	disconnected	20% - 60% charged
Red	ON	disconnected	10% - 20% charged

3) Battery status with device OFF and USB disconnected

Test by briefly pressing ON / OFF button

LED	WINP On/Off	USB	Battery
Green	OFF	disconnected	60% - 100% charged
Yellow	OFF	disconnected	20% - 60% charged
Red	OFF	disconnected	<20% charged

4. Wireless configuration

The transmitter WINP and TBox-Radio are configured and linked using two Parameters

- **Group** (radio frequency)
- **Input** (TBox-Radio inputs A-D)

NOTE: Each WINP working with TBox-Radio must be configured with the identical group setting

4.1. Groups (radio frequencies) - Europe / India

6 Groups are available.

Group A, B, C, D:

Wireless Transmission Distance: up to 2000m (clear line of sight)


Each group uses ¼ of the full frequency band

Min locking time of 200ms

Group E, F:

Wireless Transmission Distance: up to 5000m (clear line of sight)

Each group uses the full frequency band

 Those groups limit the use of 2 WINP/WIRC only

Min locking time is longer: 500ms

OFF:

The radio transmission function is disabled.

4.2. Groups (radio frequencies) - North America

8 Groups are available


Group A, B, C, D:

Wireless Transmission Distance: up to 4000m (clear line of sight)

Min locking time of 200ms

Group E, F, G, H:

Wireless Transmission Distance: up to 6000m (clear line of sight)

 Those groups limit the use of 2 WINP/WIRC only,

Min locking time is longer: 500ms

OFF:

The radio transmission function is disabled.

To configure your desired Group, press the Setup button 

The current Group selected is indicated by the LED array (A, B, C & D)

Release and press the number of times you want to change the setting.



Group	LED A	LED B	LED C	LED D
A	GREEN			
B	GREEN	GREEN		
C	GREEN	GREEN	GREEN	
D	GREEN	GREEN	GREEN	GREEN
E	YELLOW			
F	YELLOW	YELLOW		
G (*)	YELLOW	YELLOW	YELLOW	
H (*)	YELLOW	YELLOW	YELLOW	YELLOW
OFF	RED	RED	RED	RED

(*) only available for North America

4.3. TBox-Radio Input (WINP Pairing)

Each WINP/WIRC has a unique ID (serial number) that can be paired with a TBox-Radio input (A-D).

Pairing can be performed on a TBox using the “TBox-Setup” application (no need to power ON WIRC/WINP). Pairing can also be performed manually without any application. In this case, both TBox-Radio and WINP/WIRC have to be powered and the following procedure executed.

- 1) On the TBox-Radio, enter the pairing mode by pressing the Setup button  for 3 sec until a long beep sounds and LED A flash yellow.
- 2) Select then the desired input (A, B, C or D) by performing short press on the same button.
- 3) Finally enter the pairing mode on the WINP/WIRC by pressing the Setup button  for 3 second.

When pairing is completed, LEDs A to D of the TBox flash yellow and both TBox and WINP/WIRC resume normal operation.

To exit manually the pairing mode on either TBox or WINP/WIRC, just press the Setup button for 3 second until a long beep sound.

NOTE: Each TBox-Radio radio input (A to D) must be configured with a different WINP/WIRC ID to avoid data conflict.

5. Radio communication

The WINP will indicate each time an impulse is transmitted, by flashing the relevant LED representing the configured input (A-D).


WINP transmitter will resend any message several times if no ACK is received from the TBox-Radio (corresponding LED flashes yellow each time the message is resend).

Red flash means no that no acknowledgement has been received from the TBox-Radio after all retries (impulse might be lost).

Flashing green means that pulse transmission is successfully completed.

The ACK feature provides the user with a basic level of testing the positioning and communication between TBox-Radio and WINP.

Many attempts (yellow or red flashes) may indicate that the communication is not very stable. A change of position of the WINP or the TBox-Radio (maybe just the antennas) may improve the communication.

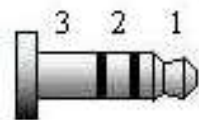
-  Radio transmissions cannot be 100% guaranteed. An unfavourable environment, lack of line of sight, interference or an improper installation might lead to the loss of data.
FDS cannot be held responsible for any of the above.

6. Wired connection

The Jack connector on the rear of the WINP Transmitter works in parallel to the main Input (Banana connector) on the front.

The WINP react to a short-circuited condition between the 2 wires.

The input impedance is 4.7kOhm, and the max voltage allowed on the input pin is 5.5V.



- 1: Input
- 2: NC
- 3: GND

7. USB

The Mini-USB connector has various functions including:

- External power supply and battery charging
- Configure the WINP photocell options /parameters (with the PC app “WIRC-Setup”)
- Update the Firmware

8. How to update the WINP firmware

Updating the firmware is relatively simple. The software “FdsFirmwareUpdate” is required

- a) Install the program “FdsFirmwareUpdate” on your computer
- b) Connect the USB cable to your PC and WINP
- c) Run the program “FdsFirmwareUpdate”
- d) Select the COM Port
- e) Select the update file (.bin)
- f) Press Start on the program (do not unplug the device during update)
- g) The WINP transmitter will be updated
- h) Once the update is complete, remove USB cable and switch ON the WINP transmitter

9. Technical specifications

Radio Power	100 mW
Frequencies : Europe	869.4 - 869.65 MHz
India	865 - 867 MHz
North America	920 - 924 MHz
Operating temperature:	-20°C to 50°C
Radio impulse precision	1/1000 sec
Min locking time (between two detections)	200ms for Groups A-D; 500ms for Groups E-F
External power input:	USB compatible (5V +/- 10%) up to 1A
Battery:	LiPo 1700mAh
Autonomy:	150 hours radio ON
Dimension:	93x60x27mm
Weight	200gr

10. Copyright and Declaration

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